

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-3, 7-10, 12, 15-18, 20-24, 27, 33, 51-53, 56, and 58-68 are pending in the application, with claims 1, 8, 16, 21, 27, and 33 being the independent claims. Claims 34-39 have been withdrawn from consideration. Claims 1, 8, 16, 21, 27, and 33 are sought to be amended. Claim 40 is sought to be canceled without prejudice to or disclaimer of the subject matter therein. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 102

Claims 1-3, 7, 33, 40, 56, and 60-62 were rejected under 35 U.S.C. § 102(e) as being anticipated by Yang *et al.*, U.S. Patent No. 7,003,118 ("Yang"). Applicants respectfully traverse this rejection.

The independent claims recite a security processor that is in-line with the data path of the packet network. As described in the specification, "[t]he security processor 118 includes network interface components (not shown) to enable the security processor 118 to send and receive data over the packet network. ... In this way, the security processor 118 is in-line with the data path of the packet network 116 and 120. In contrast, traditional security processors connect to network processors via

separate busses (e.g., a PCI bus or a POS-PHY interface) and are, therefore, outside the data path of the network." (Specification, page 13, lines 3-12).

Yang discloses such a security processor that is outside the data path. (See Yang, FIG. 1B). Yang describes an "IPsec accelerator that is installed on a Network Interface Card (NIC) of a host machine," (col. 2, lines 37-39). Regarding outbound packets, FIG. 1B of Yang illustrates outbound traffic flow 141 associated with the NIC 145 and the encryption device 171 (contained in the NIC 145). However, the outbound packet is not received by a security processor, and the outbound packet is not received from an Ethernet controller. To the contrary, Yang discloses that "[a]n outbound packet is transferred from the host to a transmit (Tx) buffer 151." (Col. 3, lines 28-29.) "The encryption device... writes the results of the encryption process back to the buffer. The encrypted outbound packet is then ready to be placed on the network wire as outbound traffic 141." (Col. 3, lines 37-43).

FIG. 3 of Yang illustrates an example architecture in detail including buffer 350 and encryption device 325. Yang discloses that "[a] packet can be transmitted out when it becomes the top packet within the Tx_Packet_Buffer 350." (Col. 7, lines 44-49.)

Thus, Yang does not teach or suggest:

"receiving, by a security processor, an internal outbound packet from an Ethernet controller over a network... and transmitting, from the security processor, the outbound network packet to an external network."

as recited in amended independent claim 1. Similarly, Yang does not teach or suggest:

"at least one security processor configured to: receive the internal outbound packet from the at least one

Ethernet controller... and transmitting the outbound network packet from the at least one security processor to an external network."

as recited in amended independent claim 33.

The Office Action further states that the "SA_ID [of Yang] is used as an index lookup to apply IP processing to the packet. It is inherent, if not obvious, that the indices have to match in order for the IP processing to be executed on the packet."

The SA_ID of Yang is the index into the security association information (Yang, page 5, lines 63-64). The SA_ID is not an address assigned to the security processor.

Thus, Yang does not teach or suggest "processing at least a portion of the received internal outbound packet if the security processor address data matches address information assigned to the security processor," as recited in amended independent claim 1. Similarly, Yang does not teach or suggest at least one security processor configured to "process at least a portion of the received internal outbound packet if the security processor address data matches address information assigned to the security processor," as recited in amended independent claim 33.

For at least these reasons, amended independent claims 1 and 33 are patentable over Yang. Claims 2, 3, 7, and 60-62 depend from claim 1. Claim 56 depends from claim 33. For at least these reasons, and further in view of their own features, dependent claims 2, 3, 7, 56, and 60-62 are patentable over Yang. The rejection is moot with respect to now canceled independent claim 40.

Reconsideration and withdrawal of the rejection are respectfully requested.

Rejections under 35 U.S.C. § 103

Yang and Sperry

Claims 8-10, 12, 15, 21-23, and 65-68 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Yang in view of Sperry, *et al.*, U.S. Patent No. 7,162,630 ("Sperry"). Applicants respectfully traverse this rejection.

The combination of Yang and Sperry does not teach or suggest each and every element of amended independent claims 8 and 21. As described above, Yang does not teach or suggest:

"[a] security processor comprising... at least one processor configured to: receive an internal outbound packet from an Ethernet controller via the at least one MAC... and transmitting the outbound network packet from the security processor to an external network."

as recited in amended independent claim 8. Similarly, Yang does not teach or suggest:

"at least one security processor configured to: receive an internal outbound packet from an Ethernet controller via at least one MAC... and transmitting the outbound network packet from the at least one security processor to an external network."

as recited in amended independent claim 21. Furthermore, Yang does not teach or suggest "if the security processor address data matches address information assigned to the security processor," as recited in amended independent claims 8 and 21. Sperry does not overcome these deficiencies of Yang. Sperry is merely directed to host-based security (Abstract) including TAAS 302, NIC 322, and IKE 312 connected via PCI bus. (See Sperry, FIG. 3). Sperry does not teach or suggest a security processor in-line with the data path of the packet network. Although Sperry discloses the "inline nature of the transmission path for the data packets" (col. 10, lines 38-39),

Sperry discloses merely that "data packets input into TAAS [are] processed in a substantially linear, in-line fashion through TCP, IP, IPSec, and MAC blocks... in the TAAS." (Sperry, col. 10, lines 42-45). However, the TAAS 302 is separated from the NIC 322 via the PCI bus as illustrated in Sperry, FIG. 3. For at least the above reasons, amended independent claims 8 and 21 are patentable over the combination of Yang and Sperry. Claims 9, 10, 12, 15, and 65-68 depend from claim 8. Claims 22 and 23 depend from claim 21. For at least these reasons, and further in view of their own features, dependent claims 9, 10, 12, 15, 22, 23, and 65-68 are patentable over the combination of Yang and Sperry. Reconsideration and withdrawal of the rejection are therefore respectfully requested.

Yang and Narad

Claims 16-18, 20, 51, 58, and 59 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Yang in view of Narad *et al.*, U.S. Patent No. 6,157,955 ("Narad"). Applicants respectfully traverse this rejection.

The combination of Yang and Narad does not teach or suggest each and every element of amended independent claim 16. As described above, Yang does not teach or suggest:

"[a]n in-line security processor comprising... at least one processor configured to receive an internal outbound packet from an Ethernet controller via at least one of the plurality of MACs... and transmitting the outbound network packet from the in-line security processor to an external network."

as recited in amended independent claim 16. Furthermore, Yang does not teach or suggest "if the security processor address data matches address information assigned to the security processor," as recited in amended independent claim 16. Narad does

not overcome these deficiencies of Yang relevant to amended independent claims 1, 16, 21 or 33, described above. Narad is merely directed to a security processor 246 (Narad FIG. 3) that is outside the data path of the packet network (e.g., outside the path between a Host connected via PCI Bus 280 and ports Ethernet A 250 or Ethernet B 254).

For at least these reasons, amended independent claim 16 is patentable over the combination of Yang and Narad. Claims 17, 18, and 20 dependent from claim 16; claim 51 depends from claim 33; and claims 58 and 59 depend from claim 1. For at least these reasons, and further in view of their own features, dependent claims 17, 18, 20, 51, 58, and 59 are patentable over the combination of Yang and Narad. Reconsideration and withdrawal of the rejection are therefore respectfully requested.

Yang, Sperry, and Amara

Claim 24 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Yang in view of Sperry and further in view of Amara *et al.*, U.S. Patent No. 7,062,566 ("Amara"). Applicants respectfully traverse this rejection.

Claim 24 depends from claim 21. Neither Sperry nor Amara overcome the deficiencies of Yang relevant to claim 21, described above. Amara is merely directed to a network access system, such as a virtual private network (VPN). (Amara, Abstract). For at least these reasons, and further in view of its own features, dependent claim 24 is patentable over the combination of Yang, Sperry, and Amara. Reconsideration and withdrawal of the rejection are therefore respectfully requested.

Yang, Sperry, and Vogel

Claim 27 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Yang in view of Sperry and further in view of Vogel *et al.*, U.S. Patent No. 6,959,007 ("Vogel"). Applicants respectfully traverse this rejection.

The combination of Yang, Sperry, and Vogel does not teach or suggest each and every element of amended independent claim 27. As described above, the combination of Yang and Sperry does not teach or suggest:

"at least one security processor configured to: receive an internal outbound packet from an Ethernet controller... and transmitting the outbound network packet from the at least one security processor to an external network."

as recited in amended independent claim 27. Furthermore, the combination of Yang and Sperry does not teach or suggest "if the security processor address data matches address information assigned to the security processor," as recited in amended independent claim 27. Vogel does not overcome these deficiencies of Yang and Sperry. Vogel is merely directed to a high speed network protocol stack in silicon (Abstract).

For at least these reasons, amended independent claim 27 is patentable over the combination Yang, Sperry, and Vogel. Reconsideration and withdrawal of the rejection are therefore respectfully requested.

Yang and Bilic

Claims 52 and 53 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Yang in view of Bilic *et al.*, U.S. Patent No. 6,947,430 ("Bilic"). Applicants respectfully traverse this rejection.

Claims 52 and 53 depend from claim 33. Bilic does not overcome the deficiencies of Yang relevant to claim 33, described above. Bilic is merely directed to a network adapter with embedded deep packet processing (Abstract). For at least these reasons, and further in view of their own features, dependent claims 52 and 53 are patentable over the combination of Yang, Sperry, and Bilic. Reconsideration and withdrawal of the rejection are therefore respectfully requested.

Yang, Sperry, and Narad

Claims 63 and 64 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Yang in view of Sperry and further in view of Narad. Applicants respectfully traverse this rejection.

Claims 63 and 64 depend from claim 8. Neither Sperry nor Narad overcome the deficiencies of Yang relevant to claim 8, described above. For at least these reasons, and further in view of their own features, dependent claims 63 and 64 are patentable over the combination of Yang, Sperry, and Narad. Reconsideration and withdrawal of the rejection are therefore respectfully requested.

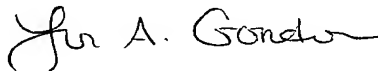
Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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